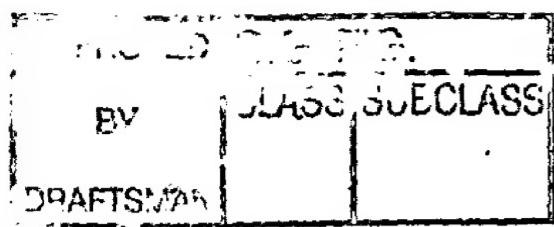


# 7

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CCGGGGGAGGGCTTAGGATGTTGTGCTCCGGGGCTCAGACGAAATCTTCTGTGAATGGAAG  
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AAACCTGATTTCGAGGAGCCGGAGGGGATATTGGAGAGAAGGTATTCCAGTCACGCCAG  
TAACAGACCAGCCAAGGACCAGGACTGGAGTTCTACAACCGTGGAACAGTGAAACGGTCT  
CCAAAGAGATGGAGTACGACGCTACAACGACTCCGGCATCTATGATGATGAGTACTCTGATGG  
CTTGCTACTTGTGGACTTGGAGGAGGCAGTCCGTGGAGGCCAAGGTGGCCCCGGTCTTC  
CTGGTGGTGTACAGCTTGGTGTGCTCCTCGGTCTCCTAGGCAACGGCTGGTATTGTCA  
TCGCCACCTTCAAGATGAAGAAGACCGTGAACACTGTGTGGTTGTCAACCTGGCTGTGGCGA  
CTTCCTGTTCAACATCTTTGCCATGCACATCACCTACGCCATGGACTACCAACTGGGTG  
TTCGGGAAGGCCATGTGCAAGATCAGCAACTTCTGCTCAGCCACAACATGTACACCAGCGTCT  
TCCTGCTACTGTCATCAGCTTGACCGCTGCATCTCCGTGCTGCTCCCCGTCTGGTCCCAGAA  
CCACCGCAGCATCCGCTGGCTACATGACCTGCTCGGCCGTCTGGTCTGGCTTCTTCTG  
AGCTCCCCGTCCCTGTCTCCGGACACCGCCAACATTGATGGAAAGATAACCTGCTTCAACA  
ACTTCAGCTTGGCCGCGCTGAGTCCTCCCCACATCCGCCACTCGCAAGTAGTTCCACAGG  
GTACAGCAGACACGTGGGGTCACTGTCACCCGTTCTGGGGCTTCTGATCCCCGTCTTC  
ATCATCACGGCCTGCTACCTTACCATCGTCTCAAGCTGCAGCGCAACCGCCTGGCCAAGAAC  
AGAAGCCCTTCAAGATCATCACCATCATCACCTCTTCTGCTGGTGGCCCTACCA  
CACCTCTACCTGCTGGAGCTCCACCACACAGCTGTGCCAAGCTCTGTCTCAGCCTGGGCTA  
CCCCTGGCCACGGCGTGCCTCGCCAACAGCTGCATGAACCCATTCTGTACGTCTTCATGG  
GCCACGACTTCAGAAAATCAAGGTGGCCCTTCTCCGCCCTGGCCAACGCCCTGAGTGAGGA  
CACAGGCCCTCCTACCCAGTCACAGGAGCTCACCAAGATGTCGTCTTGAATGAGAAC  
GCTTCGGTGAATGAGAAGGAGACCAAGTACCCCTGTAACCTCACCTGGGAATGTCCCCAAAGGT  
GCCACGGCCCAGGGACGCTAGGGACTTGTCTCCGGAAAGTGGGAGACATGCCGGAGCCTTGG  
GAATGCTCCAACGCCACTGAATTTCACAAGGCGGCTCATGTTAAGTGGGGTTCCAAGT  
GTGGACACTCTTCAGTAAATGGCAGGCAAGCAACCCGAGCTCTACAACAGGAGCAGGGGAC  
CGACTGTGACTCAGAAAAGGGAGCATTCTGAAGCCAAGACTTGAGCTGTGACCAACATA  
CAGGCCAACATACACGATGTCGCCGTGCATGCCCTGAACATGCTGCGCAGTTCTGAGGAG  
GAAGTTACCGCAAACCCATTGCAGACCTGTTATGGCAACATGACAGTCAAACCAACAAAGCCA  
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## FIGURE 1



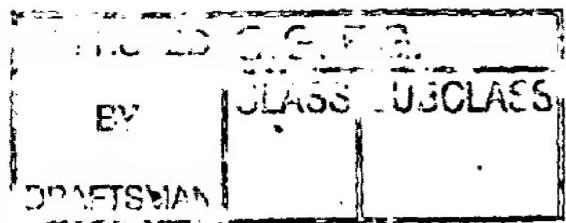
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underlined = deleted in targeting construct

[ ] = sequence flanking Neo insert in targeting construct

CCGGGGGAGGCTT~~AGGATGTTGCTCCCGGGGCTCAGACGAAATCTCTGTGAATG~~  
GAAGAAATGCTTCAAGCAAACAGCCACTACCAGAACAACTGAGAAAGAGGCCAGAGCGC  
GAGTTCTCAAACCCTGATT~~CGCAGGAGCCAGGGATATTGGAGAGAAGGTATTCC~~  
AGTCACGCGCAGTAACAGACCAGCCAAGGACCAGGACTGGAGTTCTGTTCTACAACGGTG  
GAACAGTGAACGGTCTCAAAG [AGATGGAGTACGACGCTTACAACGACTCCGGCATCTA  
TGATGATGAGTACTCTGATGGCTTGGCTACTTG~~GTGGACTTGGAGGAGGGAGTCCGTG~~  
GGAGGCCAAGGTGGCCCCGGTCTT~~CGTGTGATCTACAGCTGGTGTGCTTCCTCGG~~  
TC] TCCTAGGCAACGGCCTGGTGATTGT~~CATGCCACCTCAAGATGAAGAAGACCGTGA~~  
ACACTGTGTGGTTGTCAACCTGGCTGTGGCCGACTTCCTGTTCAACATCTTTGCCGA  
TGCACATCACCTACGCGGCCATGGACTACCACTGGTG [TT~~CGGAAGGCCATGTGCAAG~~  
ATCAGCAACTCTTGCTCAGCCACACATGTACACCAGCGTCTT~~CTGCTGACTGT~~CATC  
AGCTT~~TGACCGCTG~~CATCTCCGTGCT~~CCCCGTCTGGTCCCAGAACACCACCGCAGC~~ATC  
CGCCTGGC~~T~~CATGACCTGCTCGGCCG~~T~~CTGG~~T~~CTGG~~T~~CTTGAGCT~~CCCCG~~  
TCC~~CTGTCTT~~CGGACACGCCAACATT~~CATGG~~AAGATAACCTG~~CTCAACAA~~ACTTC  
AGCTT~~GGCCGCGCTGAGT~~CT~~CCCCACATCCC~~G~~CCACTCGCAAGTAGTTCCACAGGG~~  
TACAGCAGACACGTGGCGGT~~ACTGTCACCC~~G~~CTTGC~~GG~~CTTCTG~~AT~~CCCCG~~TC  
TTCATCATCAGGCC~~TGCTACCTTACCATCGT~~CTTCAAGCTGCAGCG~~CAACCGC~~TGGC  
AAGAACAAAGACCCTTCAAGATCATCATCACC~~ATCATCAC~~CC~~TTCTC~~CTG~~CTG~~GG  
TG~~CCCC~~TACCAACCCCT~~TACCTG~~CTGGAGCTCCACCACAGCTGTGCCAAGCT~~GT~~  
TTCAGC~~CTGGG~~CTACCC~~CTGGCC~~ACGGCC~~TGCCATGCC~~ACAGCTGC~~ATG~~CAACCCCC  
ATT~~CTGTACGT~~CTT~~CATGG~~CCACGACT~~TCAAGG~~TGGCC~~CTTCTC~~CCGC  
CTGGCC~~AA~~CGCC~~TGAGT~~GAGGACACAGGCC] CTCCTCCTACCC~~AGTCACAGGAG~~CTT  
CACCAAGATGT~~CGT~~CTT~~GAATG~~AGAAGG~~CTCGGT~~GAATGAGAAGGAGACCAGT~~ACCC~~  
CTGAAC~~CTCAC~~CTGG~~GAATG~~TC~~CCCCAAAGG~~TGCCACGGCC~~AGGGACG~~C~~CTAGGG~~ACTT  
GTCTCCGG~~AA~~GTGGAGACATGCC~~GGGAGC~~CTTGG~~GAATG~~CT~~CCAACG~~CC~~ACTG~~A~~ATT~~  
TTGCACAAGGCG~~GCT~~CAT~~TTAAGT~~GGG~~TTCCAAGTGT~~GG~~ACACTCTCC~~AGTAAA  
ATGGCAGGCAAGCAACCC~~GAGCTT~~ACA~~ACAGGAGC~~AGGG~~GACCGACTG~~GACT~~GACTC~~  
AGAAAAGGAGC~~ATTCTG~~AAGCC~~AA~~ACT~~TGAGTGT~~GACCA~~ACATACAGG~~CCAACATA  
CACGATGT~~CGCC~~GT~~G~~CATGCC~~CTG~~AAC~~ATG~~CT~~GCGCAG~~TT~~TG~~GG~~GTAGGAAG~~TTAC  
CGCAAACCCATT~~G~~CAGACCT~~G~~TT~~TG~~CAAC~~ATG~~AC~~G~~GT~~CAAACCAACAA~~AGGCCAATAC  
ACCCCAACATCC~~TCCAAGAC~~CT~~TGACTT~~GG~~ATTTC~~AGAAGAACGGGGGTGGGGGAAC  
GAGGAC~~CTGAGG~~TTA~~ATT~~CGAGCT~~TGG~~GAAGCC

FIGURE 2A



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**Gene Sequence  
Structure \***

422 bp

Sequence Deleted

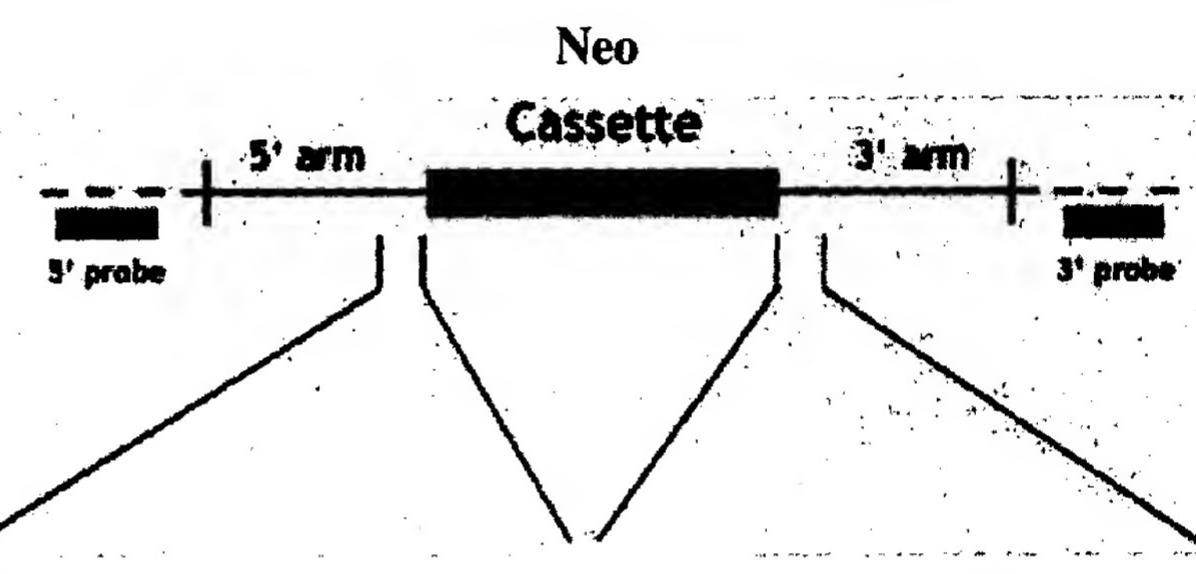
576 bp

Size of full-length  
cDNA: 1892 bp

**Targeting Vector\*  
(genomic sequence)**

Construct Number: 993

Arm Length:  
5': 2.3 kb  
3': 1.9 kb



<pre>5' &gt;CCACAGAGGTCTCAGCCTGT GACCCTGTCTTCCCTCACAGAGAT GGAGTACGACGCTTACAACGACTC CGGCATCTATGATGATGAGTACTC TGATGGCTTGGCTACTTGTGGA CTTGGAGGAGGCGAGTCCGTGGGA GGCCAAGGTGGCCCCGGTCTTCCT GGTGGTGATCTACAGCTTGGTGTG CTTCCTCGGTC&lt;3' (SEQ ID NO:2)</pre>	<pre>5' &gt;TTCGGGAAGGCCATGTGCAAG ATCAGCAACTCTTGCTCAGCCAC AACATGTACACCAGCGTCTTCTG CTGACTGTATCAGCTTGACCGC TGCATCTCCGTGCTGCTCCCGTC TGGTCCCAGAACACCAGCAGCATC CGCCTGGCCTACATGACCTGCTCG GCCGTCTGGGTCTGGCTTTCTTC TTGAGCTCCCC&lt;3' (SEQ ID NO:3)</pre>
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— Targeting Vector  
- - - Endogenous Locus

\* Not drawn to scale

**FIGURE 2B**